

What is claimed is:

1. An initiator assembly for an inflator device having at least one inflator device mating lug, the initiator assembly comprising:

an initiator including an initiator cup at least in part defining a storage chamber containing a reactive charge, the initiator also including at least one electrical connector in reaction initiating communication with the reactive charge; and

a molded body fitting over at least a portion of the initiator, the molded body including at least one locking flange;

wherein the at least one locking flange is adapted to lockingly engage the at least one inflator device mating lug.

2. The initiator assembly of claim 1 wherein the molded body is adapted to rotate about an axis perpendicular to a surface of a wall of the inflator device with an angle of rotation of about 180 degrees or less to effect the locking engagement of the locking flange with the inflator device mating lug.

3. The initiator assembly of claim 1 wherein the molded body comprises an extension portion including a first locking flange and a second locking flange on an opposite side of the extension portion from the first locking flange, and the first locking flange is adapted to lockingly engage a corresponding first inflator

device mating lug and the second locking flange is adapted to lockingly engage a corresponding second inflator device mating lug.

4. The initiator assembly of claim 3 wherein the molded body is adapted to rotate about an axis perpendicular to a surface of a wall of the inflator device with an angle of rotation of about 90 degrees or less to effect the locking engagement of the first and second locking flanges with the corresponding first and second inflator device mating lugs.

5. The initiator assembly of claim 1 additionally comprising a sealing gasket disposed between at least a portion of the molded body and the inflator device.

6. The initiator assembly of claim 3 wherein the sealing gasket is disposed about the extension portion of the molded body and between at least a portion of the molded body and the inflator device.

7. The initiator assembly of claim 1 additionally comprising:
a groove in an outer surface of an extension portion of the molded body;
and
a connector socket including a socket arm having a latch tab;

wherein at least a portion of the molded body is disposed on a first side of a wall of the inflator device, at least a portion of the connector socket is disposed on a second side of the wall of the inflator device opposite the inflator device wall first side, and the socket arm latch tab is adapted to extend into an opening in the inflator device wall and engage the extension portion groove.

8. The initiator assembly of claim 7 wherein the connector socket includes a connector socket opening and the at least one electrical connector extends through the opening in the inflator device wall and the connector socket opening.

9. The initiator assembly of claim 8 wherein the molded body and the connector socket are formed of plastic.

10. The initiator assembly of claim 9 wherein the plastic molded body and the plastic connector socket are ultrasonically welded to at least one of each other and the inflator device wall.

11. The initiator assembly of claim 1 additionally comprising:
a connector socket including a socket arm and a protrusion extending at least partially around an outer circumference of the connector socket;

wherein at least a portion of the molded body is disposed on a first side of a wall of the inflator device, at least a portion of the connector socket is disposed on a second side of the wall of the inflator device opposite the inflator device wall first side, the socket arm is adapted to extend into an opening in the inflator device wall, and the connector socket protrusion fits into a slit in the inflator device wall to join the connector socket to the inflator device wall.

12. The initiator assembly of Claim 11, wherein the socket arm, when extended into the opening in the inflator device, maintains the at least one locking flange in locking engagement with the at least one inflator device mating lug.

13. An initiator assembly, comprising:

an initiator including an initiator cup at least in part defining a storage chamber containing a reactive charge and the initiator also including at least one electrical connector in reaction initiating communication with the reactive charge;

a molded body fitting over at least a portion of the initiator, the molded body including an extension portion including a locking flange; and

a plate including a plate opening and a mating lug adjacent the plate opening;

wherein at least a portion of the molded body extension portion extends into the plate opening and the locking flange is lockingly engaged with the mating lug.

14. The initiator assembly of claim 13 wherein the locking flange is lockingly engaged with the mating lug by rotating the molded body about an axis perpendicular to a surface of the plate with an angle of rotation of about 180 degrees or less.

15. The initiator assembly of claim 13 wherein the locking flange is a first locking flange and the molded body extension portion additionally comprises a second locking flange on a side of the extension portion opposite the first locking flange;

the mating lug is a first mating lug and the plate additionally comprises a second mating lug adjacent the plate opening on a side of the plate opening opposite the first mating lug;

wherein the first locking flange is lockingly engaged with the first mating lug and the second locking flange is lockingly engaged the second mating lug.

16. The initiator assembly of claim 15, wherein the first and second locking flanges are lockingly engaged with the first and second mating lugs by rotating the molded body about an axis perpendicular to a surface of the plate with an angle of rotation of about 90 degrees or less.

17. The initiator assembly of claim 13 additionally comprising:

a groove in an outer surface of the molded body extension portion; and
a connector socket including a socket arm having a latch tab;
wherein at least a portion of the molded body is disposed on a first side of the plate, at least a portion of the connector socket is disposed on a second side of the plate opposite the plate first side, the socket arm extends through the plate opening and the second arm latch tab engages the extension portion groove.

18. The initiator assembly of claim 17 wherein the connector socket includes a connector socket opening and at least a portion of the at least one electrical connector extends through the plate opening and the connector socket opening.

19. The initiator assembly of claim 17 wherein the plate first side includes a centrally disposed plate cup portion forming a cavity on the plate second side and at least a portion of the connector socket is disposed in the cavity.

20. The initiator assembly of claim 13 additionally comprising a sealing gasket disposed about the molded body extension portion and between the molded body and the plate.

21. The initiator assembly of claim 13 wherein the molded body and the connector socket are formed of plastic.

22. The initiator assembly of claim 21 wherein the plastic molded body and the plastic connector socket are ultrasonically welded to at least one of each other and the plate.

23. The initiator assembly of claim 13 wherein the plate is one of an inflator device wall, an inflator device base, and an adapter plate.

24. A method of assembling the initiator assembly of claim 13, comprising:

inserting the molded body extension portion into the plate opening;

aligning the locking flange with the mating lug;

rotating the molded body about an axis perpendicular to a surface of the plate; and

engaging the locking flange with the mating lug to lock the molded body to the plate.

25. A method of assembling the initiator assembly of claim 17, comprising:

inserting the molded body extension portion into the plate opening;

aligning the locking flange with the mating lug;

rotating the molded body about an axis perpendicular to a surface of the plate;

engaging the locking flange with the mating lug to lock the molded body to the plate; and

latching the socket arm latch tab to the extension portion groove.

26. An initiator assembly, comprising:

an initiator including an initiator cup at least in part defining a storage chamber containing a reactive charge and the initiator also including at least one electrical connector in reaction initiating communication with the reactive charge;

a molded body fitting over at least a portion of the initiator, the molded body including an extension portion over at least a portion of the at least one electrical connector, the molded body extension portion including a first locking flange on a first extension portion side and a second locking flange on a second extension portion side opposite the first extension portion side, the molded body extension portion additionally including a first groove disposed in an outer surface and between the first and second locking elements and a second groove disposed in an outer surface and between the first and second locking flange on a side of the molded body extension portion opposite the first groove;

a connector socket including a first socket arm having a first latch tab and a second socket arm having a second latch tab; and

a plate including a plate opening and a first mating lug adjacent the plate opening and a second mating lug adjacent the plate opening on an opposite side from the first mating lug;

at least a portion of the molded body disposed on a first side of the plate and at least a portion of the connector socket disposed on a second side of the plate opposite the plate first side;

wherein at least a portion of the molded body extension portion extends through the plate opening, the first locking flange is lockingly engaged with the first mating lug and the second locking flange is lockingly engaged with the second mating lug, and the first latch tab of the connector socket first arm is engaged with the first groove and the second latch tab of the connector socket second arm is engaged with the second groove.

27. The initiator assembly of claim 26 wherein a sealing gasket is disposed about the extension portion of the molded body and between at least a portion of the molded body and the inflator device.

28. The initiator assembly of claim 26 wherein the molded body and the connector socket are formed of plastic.

29. The initiator assembly of claim 26 wherein the plastic molded body and the plastic connector socket are ultrasonically welded to at least one of each other and the plate.